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LETTER OFFERING COMMENTS ON DRAFT DECISION DOCUMENT FIREFIGHTER TRAINGING AREA AND AUTO CRAFT AREA AND REQUESTING COMMENTS FORT STORY VA
7/1/2003
U.S. ARMY CENTER FOR HEALTH PROMOTION AND PREVENTIVE MEDICINE

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DEPARTMENT OF THE ARMY
U.S. ARMY CENTER FOR HEALTH PROMOTION AND PREVENTIVE MEDICINE
5158 BLACKHAWK ROAD
ABERDEEN PROVING GROUND, MARYLAND 21010-5403

REPLY TO
ATTENTION OF

MCHB-TS-REH (40)

1 July 2003

MEMORANDUM FOR Commander, Fort Eustis, ATTN: ATZF-PWE/Mr. S. McCall, Environmental and Natural Resources Division, 1407 Washington Boulevard, Fort Eustis, VA 23604-5306

SUBJECT: Draft Decision Document (DD), Firefighter Training Area Auto Craft Building Area, Fort Story, VA, March 2003

1. The US Army Center for Health Promotion and Preventive Medicine reviewed the subject document on behalf of the Office of The Surgeon General pursuant to AR 200-1 (Environmental Protection and Enhancement). Thank you for the opportunity to review this DD. Our comments and recommendations are enclosed.

2. Our comments identify a number of misapplications of risk assessment principles, and the presentation of risk information that is inconsistent with the subject document's selected remedy. We anticipate the revised DD and look forward to providing continued support on this and other Fort Story risk assessment issues.

3. The scientist reviewing this document and our point of contract is Mr. Larry Tannenbaum, Environmental Health Risk Assessment Program, at DSN 584-5210 or commercial (410) 436-5210.

FOR THE COMMANDER:

Sherri L. Hutchens

Encl

SHERRI L. HUTCHENS
Acting Program Manager
Environmental Health Risk Assessment

CF:
HQDA(DASG-HS-PE)(wo/encl)
USAMEDCOM (MCHO-CL-W) (w/encl)
USACE (CENWO-HX-H) (w/encl)
USAEC (SFIM-AEC-ERA) (w/encl)

COMMENTS AND RECOMMENDATIONS

1. Page 1-1, Section 1.3, L. Tannenbaum
   Description of Selected Remedy
   Comment: In the page's last paragraph, one of the stated bases for a No Action remedy is inappropriate. A finding of a lesser onsite concentration than the USEPA MCL may provide confidence in having arrived at a No Action remedy decision, but it does not demonstrate a lack of risk. MCLs are largely based on technical practicability and may not be risk-based. The thrust of the DD though, should be a demonstration that risks and hazards are acceptable. MCLs are ARARs and their role in the risk assessment process is activated when there has been a demonstration of unacceptable risk, a case the subject DD is not making.
   Recommendation: In the revised DD, please remove the reference to the USEPA MCL comparison serving as one of the supports of a No Action remedy.

2. Pages 2-2 and 2-3, section 2.2.1, L. Tannenbaum
   Site History
   Comment: The strict dimensions of neither site (i.e., the Firefighter Training Area [FTA]; the Auto Craft Building Area) are provided in these pages. Additionally, it is not clear on page 2-2 that "the 40 foot square" concrete pit of the FTA is actually 40 feet by 40 feet in size, until the better worded description on page 2-4. Based on the Figures provided at the back of the document, the sites did not need to be evaluated for ecological risk concerns. See Comment #8.
   Recommendation: In the revised DD, provide the specific sizes and dimensions of the two sites in the initial descriptions.

3. Page 2-5, Section 2.3, L. Tannenbaum
   Community Participation
   Comment: The stated "no potential human health or ecological risk identified", as the reason for a remedy analysis not having been required, is misleading. The DD presents several tables of risks and hazards for human receptors, and hazards for ecological receptors, where there *are* exceedances of conventional thresholds. See Comment #7.
   Recommendation: Please consider modifying the Section's second paragraph, noting that the declaration of there being no risk or hazard is being made despite the presence of tables of risks and hazards that appear to be communicating something to the contrary.

4. Page 2-13, Section 2.5.3, L. Tannenbaum
   Nature and Extent of Contamination
   Comment: The third bullet point under "Soil" needs to be more specific in its reporting. The receptor is not identified (i.e., do the EPA Region III risk-based screening criteria refer to a resident?; an industrial worker?, etc.), nor is the exposure that is screened (although presumably, it is incidental soil ingestion). Also, how significant is it that only one soil sample exceeded the screening value for iron? In other words, how many other samples had iron at a level that did not exceed the screen? Similarly at the bottom of the page ("Northern Area"), out of how many ground-water samples was there the lone PCE detection?

Recommendation: In the revised DD, please strengthen the various bullet points by providing the necessary frequency of detection information. Note that if the frequency of detection of a chemical is at 5% or less, there is no need to note exceedances of screens. See Comment #6.

5. Page 2-14, Section 2.5.3, L. Tannenbaum
   Nature and Extent of Contamination
   Comment: There are several instances of run-on sentences and convoluted thoughts on this page. In the first bullet point, on the basis of dissolved concentrations (presumably in ground water; this is not clear) being less than the action level and the risk-based concentration, the text concludes that lead and arsenic are associated with sediment in the ground-water sample. (The page's fourth bullet point has a similar deduction.) This is not understood. In the second bullet point, the phrase "minimal migration" is vague. The third bullet's first sentence needs to be rewritten before it can be understood and considered. The fifth bullet point needs to provide the frequency of detection for arsenic, and also needs to indicate what the lack of any trending of VOC distribution and depth and lateral distance means (i.e., does it help or hinder things that there is no trending?).
   Recommendation: Please address the various points in the Comment and make all necessary corrections.

6. Pages 2-15 and 2-16, Section 2.5.3, L. Tannenbaum
   Nature and Extent of Contamination
   Comment: Page 2-15's first bullet point paragraph doesn't specify which risk screening criteria were used. Regarding the page's next-to-last bullet point, the specific concentrations (maximum, average, etc.) that were screened are not identified. The page's last bullet point needs to provide the frequency of detection for chloroform. The first bullet point of page 2-16 needs to indicate the total number of samples corresponding to the one case of risk-based concentration exceedance, and it should also show by how much the risk-based screen was exceeded.
   Recommendation: Please make the necessary changes as per the points raised in the Comment.

7. Page 2-19, Section 2.6, L. Tannenbaum
   Current and Potential Future Site and Resource Uses
   Comment: This page introduces confusion to the DD. It begins by saying that the installation is expected to remain government property. Then the text acknowledges that the installation *could* be closed, in which case it could be developed either commercially or residentially (and where these additional exposures could make for a difference in the level of protection afforded by the installation). Then the text underscores that COPCs were identified only for the residential scenario, but dismisses these and the calculated risks for associated receptors because the sites are not expected to be used in either a commercial/industrial or residential context.
   Recommendation: Please have the revised DD make a more declarative statement with regard to the future use at the sites. Note that as the DD now stands, in presenting "unacceptable" risks and hazards in standard fashion (e.g., risk and hazard summary tables), the credibility of the claim that the sites can be closed out with a No Action decision, is severely compromised. If the DD wants to proceed recommending a No Action decision, it should

8. Pages 2-23 through 2-35, Section 2.7, L. Tannenbaum
Summary of Site Risks

Comment: It is highly unusual for a DD to provide numerous pages of risk assessment principles and technical matter (such as equations, exposure assumptions, mechanisms of toxicological action, etc.), as does the subject document. Traditionally, a DD will refer to prior published documents that house such information. The DD for this multiple-page stretch reads much like a risk assessment. A number of specific comments applicable to this Section are provided here:

- In page 2-26's second bullet point, is the implication that 2.7 E-06 is a problematic cancer risk level? Does this figure correspond to the combined exposures of a resident to soil and ground water? Moreover, if the bullet point's last sentence is saying that arsenic concentrations onsite are consistent with background, then why was risk calculated in the first place. A useful reference in this context is Tannenbaum, L.V., 2003. The Role of Background in Hazardous Waste Site Risk Assessments: Getting Back to Basics. Human and Ecological Risk Assessment (in press).
- The particulars of the background screening (chemical concentration comparison of onsite and background) alluded to in page 2-26's next-to-last paragraph, are not provided but should be.
- The text of the first bullet point on page 2-27 ("Herbaceous Vegetation") and other similar paragraphs fail to recognize that the authors of the commonly applied published phytotoxicity reference values, indicate that the values do not need to be applied if a site appears to be normally vegetated (which apparently is the case at the two sites).
- Based on the information provided in the bullet paragraph ("Killdeer"; page 2-27), there was no reason to evaluate the Killdeer. It is highly doubtful that there would be even a single pair of these birds at either site.
- Based on what is known of the Gray fox (even without the information provided in page 2-28's second bullet point), there was no need to evaluate the species. This fox would spend virtually all of its time away from the two sites.
- A relevant citation that should be used to strengthen page 2-32's second bullet point is: Tannenbaum, L.V., 2001. What's So Bad About Weight Loss, Blood Chemistry Effects, Kidney Toxicity, etc. in a Modeled Ecological Receptor? Human and Ecological Risk Assessment, Volume 7(6): 1765-1767.
- The last two bullet points of page 2-35 are problematic. Realistically, the Auto Craft site should not have proceeded to a risk assessment, let alone a DD, if there was only one surface soil sample and only two dissolved ground-water samples that were analyzed for metals.

Recommendation: Please significantly streamline the DD, so as to provide a very brief summarization of risks and hazards, and present the findings in one or two risk summary tables as opposed to multiple sentences that contain many facts and figures. Please consider and address the numerous specific points of the Comment.

9. General Comment, L. Tannenbaum
Comment: There is no reference section in the subject document.
Recommendation: In the revised DD, please include a reference section.